Programming 1

COSC 2231

RMIT

- Lecturer :
  - Ms Thiba (Lecture, Tutorial)
  - Mr Sanath (Lab)
- Email:

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- Room: C 9.04, Ext :5276
- Consultation hours :
  - Mon 11am-12pm
  - Tues 1pm-2pm

Class Rules

- Switch off your phone / silent mode

Programming 1

- One of the most important subject in this degree program.
- Assessment

a) Exam (40%)

b) Coursework (60%)

(i) Programming assignments 35%

- Assignment 1 5%
- Assignment 2 10%
- Assignment 3 20%

(ii) Lab Sessions (10 Demo exercises) 10 %

(iv) Mid-semester test (Week 7) 15 %

- Note: You need to pass both components (a) and (b) to pass the course.

Resources

Prescribed:

- Introduction to Programming with Java: Comprehensive Edition, 7th Edition, Daniel Liang, Pearson Education, Inc., 2008

Recommended Reference:

- Walter Savich, *Absolute Java*, 2nd Edition, Pearson Education, Inc., 2008
- *Deital and Deital, Java How To Program,* Prentice Hall (latest edition)

On-line Materials

- Blackboard / RMIT Learning Hub (lecture notes, review questions, etc.)

How can I do well ?

- Attend all lectures and classes. Don’t be late for class.
  - Class start on 8.10am
- Pay attention in class; don’t talk except if discussing class material.
- Keep up with classes each week. Do not wait till exam time. You will surely fail that way.
- Read the textbook.
- Ask questions in class if unclear. See me in my office if have additional questions.
- Start your programming assignment early
- Start writing programs from week 1 itself! Those who start early always do well.
- Note than you may have to complete both the tutorials and lab to understand a topic fully! Attending a lecture alone will not gurantee understanding.
- DOING IS BELIEVING! DOING IS UNDERSTANDING!

Teaching Plan

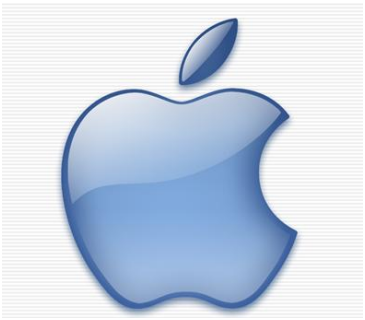
Week	Topics
1.	Programming languages and Java
2.	Java variables, identifiers, operators and precedence
3.	Selection
4.	Repetition, Arrays
5.	Classes & Objects
6.	Methods and parameters
7.	Inheritance
8.	Polymorphism
9.	Abstract Classes
10.	Polymorphism
11.	File Input / Output
12.	Exception Handling

What is programming ?

Computer program/ Software is a set of instructions that guide a computer to execute a particular task. It is like a recipe for a cook in making a particular dish. The recipe contains a list of ingredients called the data or variables, and a list of steps that guide the computer what to do with the data. So **programming** is the technique of making a computer to perform something you want to do.

HTML
XML
JAVA
C++
Oracle – Database management system

Microsoft®



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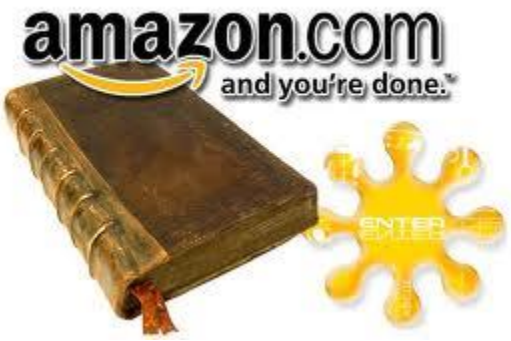

To create applications

Programming Knowledge

Java Developer

(Damansara Uptown)

Responsibilities:

This role reports to the Development lead, who is responsible for monitoring and maintenance of development services. In this role, the developer will work on customer projects so that they get delivered on time and per specifications, and also requires extensive interaction with client project teams over the phone/email. Responsibilities include:

- Convert functional specifications into detailed design
- Estimate work involved in developing changes
- Develop/configure/custom-build Java applications based on technical specifications
- Conduct peer-review of code and documentation
- Conduct factory and system testing
- Delivery packaging, merging and build

Requirements:

- Degree/Diploma in a IT/Computer Science or any equilavent discipline.
- Working experience between 3 to 5 years in IT Application area with strong background in software development/maintenance mainly on Java.

Application Developer

(Kuala Lumpur)

Responsibilities:

- Maintain (design, documentation, implementation, and testing) existing visualization tools (SmartTools) and provide troubleshooting support as required.
- Development will involve graphics programming of 3D models to match the behavior and properties of actual furniture products.
- Software development involves developing algorithms and problem solving skills.
- Collaborate with teams from North America & Europe on development. Work with/support QA team to analyze and resolve defects.
- Identify problems and contribute toward continuous improvement of processes, not only within the team but in various areas in the company; such as developing scripts to automate common processes.

Requirements:

- Proficient in Object Oriented concepts and have applied it in applications.
- Familiarity with C++, C# or Java syntax is desired.

Software Engineer

(Selangor - Kelana Jaya)

Responsibilities:

- Develop, customize and implement software solutions and applications for our clients in telecommunication industry, e-Commerce, web and mobile applications development
- Participate in all phases of SDLC activities including business requirements gathering and analysis, solution architecture design, data modeling, development, test (Unit Test, SIT, UAT), deployment and technical/system documentations

Requirements:

- Candidates must possess Adv. Diploma / Bachelor Degree in Computer Science / Information Technology / Engineering or equivalent
- Hands on experience in one or more of the following skills:
    - Telco/Business Intelligence: Java, C/C++, RDBMS, PERL, Unix Shell Scripting

Tools

- JDK (compiler , JRE)
- Jcreator

Application

- Console
- GUI

Sample Java Programs